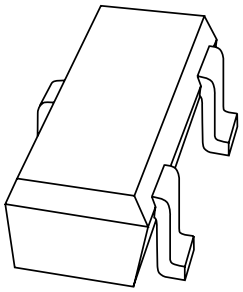
查询1PS59SB20供应商

DATA SHEET



1PS59SB20
Schottky barrier diode

Product specification

1998 Jul 28

Philips
Semiconductors

PHILIPS

Schottky barrier diode 1PS59SB20

FEATURES

- Ultra fast switching speed
- Low forward voltage
- Guard ring protected
- Small SMD package.

APPLICATIONS

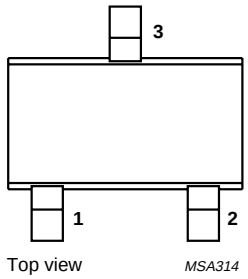
- High-speed switching
- Voltage clamping
- Protection circuits.

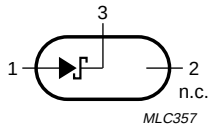
PINNING

PIN	DESCRIPTION
1	anode
2	not connected
3	cathode

DESCRIPTION

Planar Schottky barrier diode with an integrated guard ring for stress protection in an SC-59 small SMD plastic package.





Marking code: 20.

Fig.1 Simplified outline (SC-59) and symbol.

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	MIN.	MAX.	UNIT
V_R	continuous reverse voltage	–	40	V
I_F	continuous forward current	–	500	mA
I_{FSM}	non-repetitive peak forward current	–	2	A
T_{stg}	storage temperature	–65	+150	°C
T_j	junction temperature	–	125	°C

ELECTRICAL CHARACTERISTICS

T_j = 25 °C unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_F	forward voltage	I_F = 500 mA; see Fig.2	–	550	mV
I_R	reverse current	V_R = 35 V; see Fig.3	–	100	µA
		V_R = 35 V; T_j = 100 °C; see Fig.3	–	10	mA
C_d	diode capacitance	f = 1 MHz; V_R = 0; see Fig.4	60	90	pF

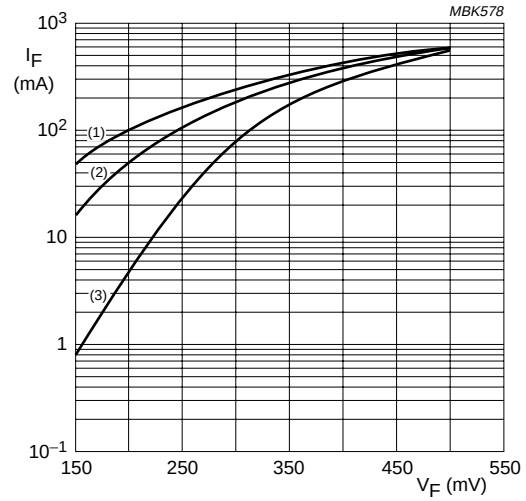
THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j\text{-}a}$	thermal resistance from junction to ambient	note 1	500	K/W

Note

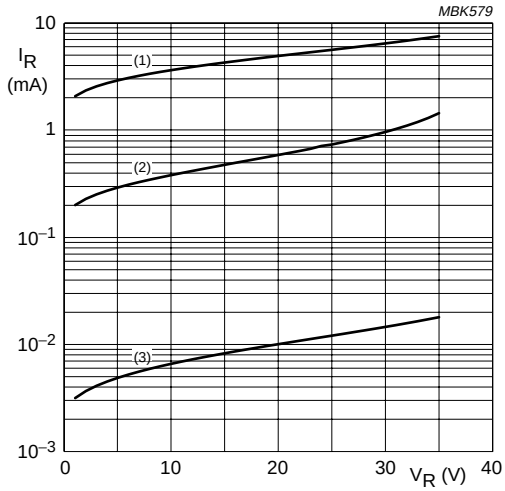
1. Refer to SC-59 standard mounting conditions.

GRAPHICAL DATA



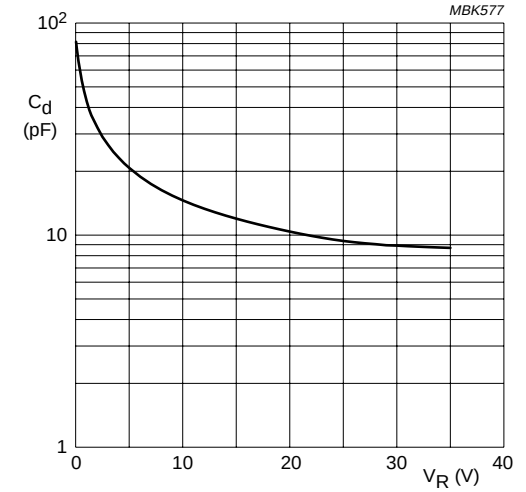
(1) T_{amb} = 125 °C.
(2) T_{amb} = 85 °C.
(3) T_{amb} = 25 °C.

Fig.2 Forward current as a function of forward voltage; typical values.



(1) T_{amb} = 125 °C.
(2) T_{amb} = 85 °C.
(3) T_{amb} = 25 °C.

Fig.3 Reverse current as a function of reverse voltage; typical values.

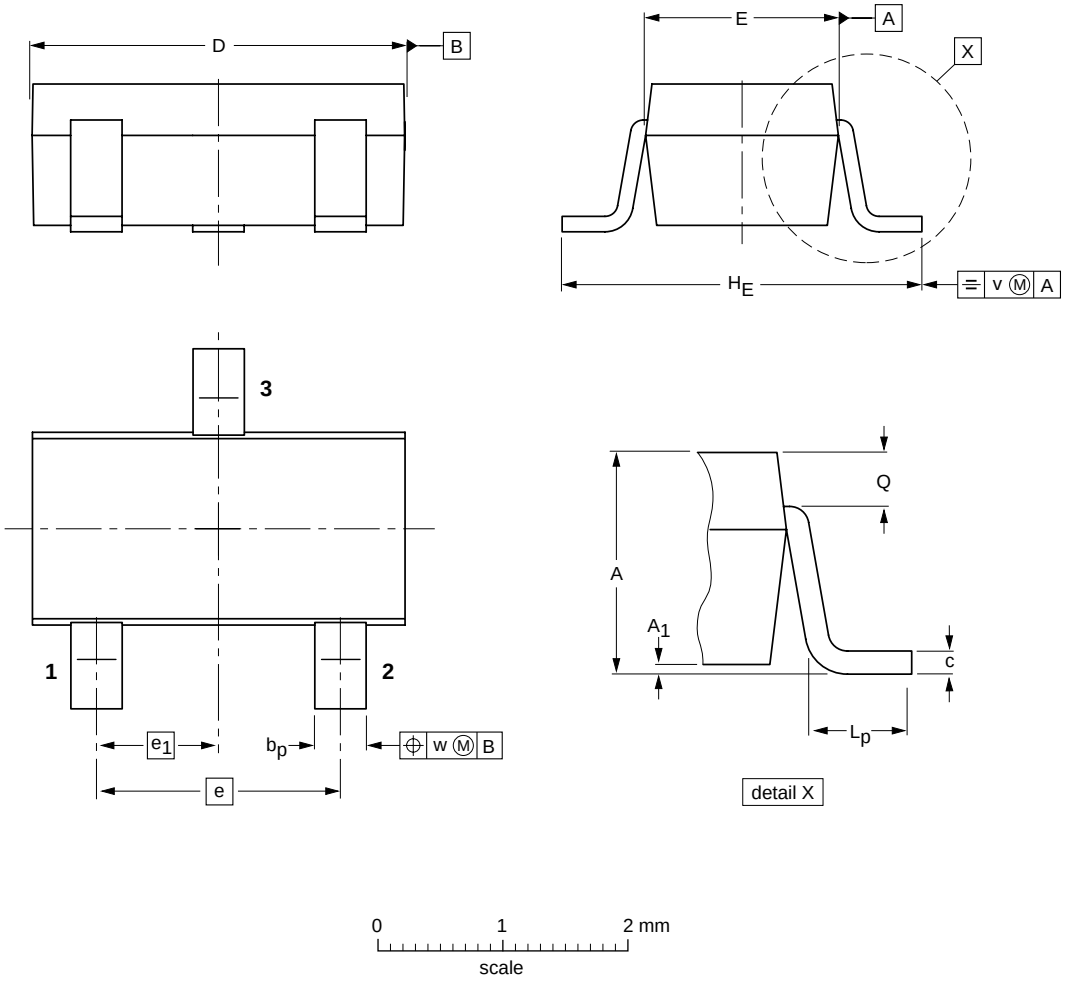


f = 1 MHz; T_j = 25 °C.

Fig.4 Diode capacitance as a function of reverse voltage; typical values.

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads **SOT346**



DIMENSIONS (mm are the original dimensions)

UNIT	A	A_1	b_p	c	D	E	e	e_1	H_E	L_p	Q	v	w
mm	1.3 1.0	0.1 0.013	0.50 0.35	0.26 0.10	3.1 2.7	1.7 1.3	1.9	0.95	3.0 2.5	0.6 0.2	0.33 0.23	0.2	0.2

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT346		TO-236	SC-59			98-07-17

DEFINITIONS

Data sheet status	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
Limiting values	
Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.	
Application information	
Where application information is given, it is advisory and does not form part of the specification.	

LIFE SUPPORT APPLICATIONS

These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. Philips customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Philips for any damages resulting from such improper use or sale.

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